

Nicholas Deas

curriculum vitae

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EDUCATION

Columbia University – School of Engineering and Applied Sciences

New York City, NY

PhD in Computer Science

September, 2022 - Present

Advisor: Professor Kathleen McKeown

Research Focus: Natural Language Processing, Bias and Fairness, Computational Social Science

MS in Computer Science

September, 2022 – May 2024

GPA: 4.0

Clemson University

Clemson, SC

BS in Computer Science, BS in Psychology, minor in Business

August, 2018 – May, 2022

GPA: 4.0

Calhoun Honors College, National Scholars Program

RESEARCH EXPERIENCE

Columbia University

New York, NY

Graduate Research Assistant

September, 2022 – Present

- Drawing on linguistic and social science theory to evaluate and develop socially aware language technologies
- Ensuring the safe and equitable deployment of language models and tools through mitigating societal biases

Clemson University

Clemson, SC

Social Psychology Creative Inquiry Researcher

August, 2020 – May, 2022

- Developed machine learning models to classify Reddit posts by psychological constructs like mattering
- Assisted in development of 4 survey studies concerning Greek Life, mattering, vaccines, and mask mandates during the COVID-19 pandemic
- Presented research on mass shootings and mask/vaccine perceptions at national conferences

Machine Learning Creative Inquiry Researcher

August, 2018 – May, 2022

- Coded automated web-scraper to generate data set of over 2 million congressional Tweets
- Developed and evaluated machine learning models for sentiment and topic classification
- Co-authored 2 research papers in preparation to be submitted and gave 2 presentations at national conferences

Natural Language Processing Undergraduate Researcher

May, 2020 – August, 2021

- Tested novel model architecture to correct speech recognition system outputs
- Co-authored a manuscript on application with speech recognition to battlefield medic data

TEACHING EXPERIENCE

Columbia University/Barnard College

New York, NY

Teaching Assistant, Language Generation and Summarization Seminar August 2023 – December 2023

Teaching Assistant, Natural Language Processing August 2024 – December 2024

SPEAKING EXPERIENCE

Ethical Issues of Algorithms and AI

- Advocacy in Emergent Technology, UPenn, Philadelphia, PA October, 2024

African American Language Bias and Large Language Models

- NLP Seminar, Columbia University, New York, NY October, 2023
- Language Generation Seminar, Columbia University, New York, NY November, 2023
- ScholarTalks, Columbia University, New York, NY January, 2023

AWARDS AND HONORS

Provost Diversity Fellows Mini Grant, Columbia University Office of the Provost July, 2023

NSF Graduate Research Fellowship, National Science Foundation September, 2022

Presidential Fellowship, Columbia School of Engineering and Applied Sciences September, 2022

Provost Diversity Fellowship, Columbia University Office of the Provost September, 2022

Phi Kappa Phi Certificate of Merit, Clemson School of Engineering April, 2022

Academic Excellence Award, Clemson College of Behavioral, Social, and Health Sciences April, 2022

Davenport Scholars, Clemson Psychology Department January, 2021/2022

Best Undergraduate Research Poster, Midwest Political Science Association April, 2020

Cullinet Outstanding Senior Award, Clemson School of Computing April, 2020

DuPont Best Undergraduate Project Scholarship, Clemson School of Computing August, 2020

Best Use of Data Award, Clemson Hackathon February, 2020

Overall Hackathon Runner-up, Booze-Allen- Hamilton Hackathon March, 2019

Best Use of Google Cloud Platform, Clemson Hackathon February, 2019

National Scholars Program (full scholarship), Clemson University August, 2018

PUBLICATIONS

Nicholas Deas, Elsbeth Turcan, Ivan Ernesto Perez Mejia, and Kathleen McKeown. 2024. MASIVE: Open-Ended Affective State Identification in English and Spanish. In *Proceedings of the 2024 Conference on Empirical Methods in Natural Language Processing*, pages 20467–20485, Miami, Florida, USA. Association for Computational Linguistics. DOI:

Nicholas Deas, Ximeng Hou, Shana Kleiner, Tajh Martin, Sreya Nandanampati, Desmond Patton, Kathleen McKeown. 2024. PhonATE: Impact of Type-Written Phonological Features of African

American Language on Generative Language Modeling Tasks. In *Proceedings of the First Conference on Language Modeling*, Philadelphia.

Jeffrey A. Fine, D. Hudson Smith, Cierra Oliveira, **Nicholas Deas**, Spencer Shellnutt, Riley Stotzky, and Rachel Clyburn. 2024. How Negativity and Policy Content Drive the Spread of Political Messages. *Journal of Information Technology and Politics*, pages 1-10. DOI: <https://doi.org/10.1080/19331681.2024.2352475>

Nicholas Deas, Jessica Grieser, Shana Kleiner, Desmond Patton, Elsbeth Turcan, and Kathleen McKeown. 2023. Evaluation of African American Language Bias in Natural Language Generation. In *Proceedings of the 2023 Conference on Empirical Methods in Natural Language Processing*, pages 6805–6824, Singapore. Association for Computational Linguistics. DOI: [10.18653/v1/2023.emnlp-main.421](https://doi.org/10.18653/v1/2023.emnlp-main.421)

Nicholas Deas, Robin Kowalski, Sophie Finnell, Emily Radovic, Hailey Carroll, Chelsea Robbins, Andrew Cook, Kenzie Hurley, Natalie Cote, Kelly Evans, Isabel Lorenzo, Kelly Kiser, Gabriella Mochizuki, Meredith Mock, and Lindsey Brewer. 2023. I Just Want to Matter: Examining the Role of Anti-mattering in Online Suicide Support Communities Using Natural Language Processing. *Computers in Human Behavior*. DOI: <https://doi.org/10.1016/j.chb.2022.107499>

Robin Kowalski, **Nicholas Deas**, Noah Britt, Emily Richardson, Sophie Finnell, Kelly Evans, Hailey Carroll, Andrew Cook, Emily Radovic, Tanner Huyck, Bella Parise, Chelsea Robbins, Hannah Chitty, and Sophie Catanzaro. 2022. Protection Motivation Theory and Intentions to Receive the COVID-19 Vaccine. *Health Promotion Practice* (2023). DOI: <https://doi.org/10.1177/15248399211070807>

Minjae Woo, Prabodh Mishra, Ju Lin, Snigdhaswin Kar, **Nicholas Deas**, Caleb Linduff, Sufeng Niu, Yuzhe Yang, Jerome McClendon, D. Hudson Smith, Stephen L. Shelton, Christopher E. Gainey, William C. Gerard, Melissa C. Smith, Sarah F. Griffin, Ronald W. Gimbel, and Kuang-Ching Wang. 2021. Complete and Resilient Documentation (CARD) for Operational Medical Environments Leveraging Mobile Hands-free Technology in a Systems Approach. *JMIR mHealth and uHealth* 9, 10 (2021). DOI: <https://doi.org/10.2196/32301>

Robin Kowalski, Kenzie Hurley, **Nicholas Deas**, Sophie Finnell, Kelly Evans, Chelsea Robbins, Andrew Cook, Emily Radovic, Hailey Carroll, Lindsey Brewer, and Gabby Mochizuki. 2021. PMT Unmasked: Applying the Protection Motivation Theory of Health to Skepticism Toward COVID Mask and Vaccine Mandates. *AIMS Public Health* 9, 3 (2021), 506-520. DOI: <https://doi.org/10.3934/publichealth.2022035>

CONFERENCE PRESENTATIONS

Tyler Hendley, **Nicholas Deas**, Sophie Finnell, and Robin M. Kowalski. 2024. An Examination of Mass Shooters in the 21st Century in Relation to the Interpersonal Theory of Suicide. In *Association for Behavioral and Cognitive Therapies*, Philadelphia, PA.

Jessica A. Grieser, **Nicholas Deas**, Shana Kleiner, Desmond U. Patton, James Shepard, Elsbeth Turcan, and Kathleen McKeown. 2023. Exploring the Deficiencies of Large Language Models in Using AAL: An Interdisciplinary Study. *New Ways of Analyzing Variation 51*. Queens College CUNY.

Nicholas Deas, Cierra Oliveira, Riley Stotzky, and Leah Terry. 2022. Partisan Differences in Politicians' Rhetoric about COVID-19, and Why These Messages Spread Online. In *Midwest Political Science Association Conference*.

Nicholas Deas, Sophie Finnell, Emily Radovic, Hailey Carroll, Chelsea Robbins, Natalie Cote, Kelly Kiser, Isabella Lorenzo, Meredith Mock, Kelly Evans, Andrew Cook, Gabby Mochizuki, Lindsey Brewer, Kenzie Hurley, and Robin Kowalski. 2022. I Just Want To Matter!: Applying Natural

- Language Processing to Detect Psychological Constructs in Online Peer-Support Communities. In *Society of Personality and Social Psychology Conference*.
- Robin Kowalski, **Nicholas Deas**, Noah Britt, Chelsea Robbins, Sophie Finnell, Kelly Evans, Hailey Carroll, Andrew Cook, Emily Radovic, Emily Richardson, Tanner Huyck, Bella Parise, Hannah Chitty, and Sophie Catanzaro. 2022. Protection Motivation Theory and Intentions to Receive the COVID-19 Vaccine. In *Society of Personality and Social Psychology Conference*.
- Robin Kowalski, Kenzie M. Hurley, **Nicholas Deas**, Sophie Finnell, Emily Radovic, Kelly Evans, Andrew Cook, Chelsea Robbins, Lindsey Brewer, Gabby Mochizuki, and Hailley Carroll. 2021. Predicting Attitudes Toward COVID-19 Mask and Vaccine Mandates. In *Society of Southeastern Social Psychologists Conference*.
- Robin Kowalski, Andrew Cook, Kaitlyn Rubley, Hailley Carroll, Emily Richardson, Catherine Chapman, Hannah Chitty, Kelly Evans, **Nicholas Deas**, Tanner Huyck, Bella Parise, Chelsea Robbins, and Mark Leary. 2020. Threats to Masculinity in K-12, College/University, and Mass Shootings. In *Society of Southeastern Social Psychologists Conference*.
- Nicholas Deas**, Jacob Sargent, and Spencer Shellnut. 2019. Using Natural Language Processing to Automate Detection of Targeted Attacks in Political Tweets. In *Midwest Political Science Association Conference*.
- Jeffrey Fine, **Nicholas Deas**, Jacob Sargent, Spencer Shellnut, and D. Hudson Smith. 2019. Content Analyzing Political Tweets Using Natural Language Processing; Opportunities and Challenges. In *Southern Political Science Association Conference*.
- Jacob Sargent, Spencer Shellnut, and **Nicholas Deas**. 2019. How Characteristics of Members of the House of Representatives and the Political Environment Affect the Use of Political Attacks on Twitter. In *Midwest Political Science Association Conference*.